

B/152/63/000/002/001/003
B126/B186

AUTHORS: Sultanov, M. Yu., Belen'kiy, M. S.

TITLE: Oxidation of CO and high-degree oxidation of n-heptane on a copper-chromium oxide catalyst $2\text{CuO} \cdot \text{Cr}_2\text{O}_3$.

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 2
1963, 50 - 55

TEXT: Detailed tests on the above reactions were carried out with a view to decontaminating exhaust and recovery gases. The catalyst obtained by decomposition of precipitated copper and chromium hydroxides at 180°C was heated for 2 hrs and broken into pieces of 3 - 3.5 mm. At a volume velocity of 52000 hr^{-1} 85 % CO was oxidised at 280°C and 80 % n-heptane at 380°C . The size of the pellets did not influence the activation energy. The course of the reaction with CO and n-heptane was of the first order and with oxygen zero. The kinetics of CO oxidation in concentrations of 0.5 to 6 % can be expressed by a simple equation. For the kinetics of high-degree oxidation of n-heptane this equation applies only if the initial concentration is constant, as its increase reduces the reaction velocity. Tests

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Oxidation of CO and high-degree oxidation ...

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with 2 % vapour in the blend showed that reaction was deferred about 1.5 times. The same decrease in the oxidation velocity of CO and n-heptane was also observed after 620 hrs of work. However the initial oxidation degree can be regained by increasing the temperature by 20°C. There are 4 figures and 3 tables.

ASSOCIATION: Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova
(Azerbaydzhani Institute of Petroleum and Chemistry imeni
M. Azizbekov)

SUBMITTED: July 17, 1962

Card 2/2

SULIMANOV, M.Ye.; BELIN'KIY, M.S.

Effect of composition on the properties of copper-chromium
oxide catalysts in the oxidation of carbon monoxide. Izv. vys.
zav.; neft' i gaz 5 no.9:63-69 '62. (MIRA 17:5)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova.

SHIMON, N.S.

Degree of the gravity of injuries inflicted with stabbing and
cutting weapons penetrating into the thoracic cavity. Azerb.
med. zhur. 42 no. 7:48-52 J1 '65 (MIRA 19:1)

SADYKH-ZADE, S.I.; SULTANOV, N.T.

New method of synthesizing α , - β -chlorostyrenes by the direct
chlorination of styrene. Azerb.khim.zhur. no.5:33-36 '60.
(MIRA 14:8)

(Styrene) (Chlorination)

SULTANOV, N.T.; ALIYEVA, M.A.; KODZHAYEVA, Sh.Ya.; SADIKHZADE, S.I.

Anomalous chlorination of isobutylene. Azerb. khim. zhur. no.1:35-38
'65. (MIRA 18:7)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

SULTANOV, N.T.; ALIYEVA, M.A.; SADYKHZADE, S.I.

Chlorination of methyl methacrylate. Azerb.khim.zhur. no.6:
23-27 '63. (MIRA 17:3)

MAMEDOV, Shamkhal; SULTANOV, N.T.; SADYKHADE, S.I.; KHODZHAYEVA, Sh.Ya.;
PISHNAMAZADE, B.F.

Alkylation of α -chloromethylalkyl ethers with methallyl
chloride. Azerb. khim. zhur. no.1:81-87 '64.

(MIRA 17:5)

L 44582-66 EWT(m)/EWP(j)/T IJP(c) WN/RM

ACC NR: AP6015674 (A) SOURCE CODE: UR/0413/66/000/009/0077/0077

INVENTOR: Sadykh-zade, S. I.; Sultanov, N. T.; Aliyeva, M. A.;
Akhmedova, G. G.; Radchenko, I. I.; Roykh, B. N.; Krchmarek, V. V.

ORG: none

TITLE: Method for obtaining synthetic rubber. Class 39, No. 181295
 [announced by Institute of Petrochemical Processes, AN Azerbaydzhan
 SSR (Institut neftekhimicheskikh protsessov AN Azerbaydzhanskoy SSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9,
 1966, 77

TOPIC TAGS: synthetic rubber, butadiene styrene rubber, copolymeriza-
 tion, polymerization initiator

ABSTRACT: An Author Certificate has been issued for a method of obtain-
 ing synthetic rubber by water-emulsion copolymerization of butadiene
 with styrene in an alkaline medium in the presence of conventional
 initiators, buffers, emulsifiers, and regulators. To improve the
 physical and mechanical properties of the rubber, the copolymerization

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UDC: 678.762.2-139

L 44592-66

ACC NR: AP6015674

is carried out in the presence of methyl α,β -dichloroisobutyrate as the
third comonomer for butadiene. [Translation] [NT]

SUB CODE: 11/ SUBM DATE: 04Jun65/

Card

2/2 *27m*

5-~~(2,3)~~ 5.3700 (B) (C)
AUTHORS:

Petrov, A. D., Corresponding Member
AS USSR, Vdovin, V. M., Sultanov, R.

66425
SOV/20-128-6-30/63

TITLE:

Synthesis of α,ω -Di-(cyano-alkyl) Tetraalkyl Disiloxanes

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 6, pp 1204 - 1207
(USSR)

ABSTRACT:

On the basis of analogy with organic dinitriles, it is to be expected that also organo-silicon compounds having 2 fragments [A] in the molecule ($A \equiv Si(CH_2)_n CN$, where $n \geq 2$) may be used as initial raw materials for the production of α,ω -difunctional compounds utilizable for the synthesis of organo-silicon polymers. The present paper refers to the synthesis of α,ω -dinitriles of type [B] (see Diagram). The addition of 2 moles of allyl cyanide to $HR_2SiOSiR_2H$ by means of I. L. Speir's (Ref 7) catalyst (Table 1, Experiments Nr 5 and 6) was not successful. Ethyl-methyl chlorosilane has already been added to cyanous olefines (Table 1, Experiments 3,7). The synthesis of the desired α,ω -dinitriles was possible by hydrolysis of the monochlorides obtained. Water was used as a hydrolyzing agent. By use of concentrated HCl and under harder conditions, the corresponding α,ω -acid was formed.

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29520
S/062/61/000/011/007/012
B103/B147

53700

AUTHORS: Vdovin, V. M., Sultanov, R., Sladkova, T. A., Freydlin, L. Kh.,
and Petrov, A. D.

TITLE: Addition of alkoxy silane hydrides to unsaturated nitriles
and hydration of the ω -cyano-alkyl-alkoxy silanes produced

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh
nauk, no. 11, 1961, 2007 - 2012

TEXT: The authors studied the addition of alkoxy silane hydrides to:
a) allyl cyanide; b) β -cyano-ethyl ether of allyl alcohol; and c)
acrylonitrile. It has been found that the addition takes place as follows:
 $R'(RO)_2SiH + CH_2 = CHCH_2X \rightarrow R'(RO)_2SiC_2H_4CH_2X$, R' being $-CH_3$, $-OC_2H_5$, or
 $-OCH_3$; R being $-CH_3$, or $-C_2H_5$; and X being $-OCH_2CH_2CN$, or $-CN$. The reaction
takes place already at atmospheric pressure, if a mixture of equimolar
quantities of the reagents is boiled in the presence of Pt/C (20% of Pt)
or a 0.1 N solution of H_2PtCl_6 in isopropyl alcohol. The yields in
addition products were 40 - 50% related to the components used, and up to
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Addition of alkoxy silane hydrides...

85% related to reacted unsaturated nitrile. Yields can be increased and the reaction time essentially reduced in sealed glass ampullas. The main reaction was accompanied in all cases by a disproportionation of the alkoxy radicals of the initial alkoxy silane hydrides: $2(\text{C}_2\text{H}_5\text{O})_3\text{SiH} \rightarrow (\text{C}_2\text{H}_5\text{O})_4\text{Si} + [(\text{C}_2\text{H}_5\text{O})_2\text{SiH}_2]$, whereby the dihydride formed continued to disproportionate. The frequencies of $-\text{CH}_3$ groups were absent in the infrared absorption spectra of the ω -cyano-alkyl trichlorosilane. For this reason, the structures: $\text{Cl}_3\text{SiCH}_2\text{CH}_2\text{CH}_2\text{CN}$ and $\text{Cl}_3\text{SiCH}_2\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{CN}$ were attributed to these nitriles. The ω -cyano-alkyl-trialkoxysilanes which were produced by addition of both trialkoxy silane hydride and HSiCl_3 to unsaturated nitriles, had identical properties. Thus, it is concluded that the addition of both $(\text{RO})_3\text{SiH}$ and Cl_3SiH to these nitriles proceeds in the same way, i. e., that the trialkoxy silyl group is placed at the end of the molecule. The interaction of $\text{CH}_3(\text{OC}_2\text{H}_5)_2\text{SiH}$ and unsaturated nitriles results perhaps in a mixture of products added to the double bond. This is proved by the wide boiling ranges of these products. An

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Addition of alkoxy silane hydrides...

addition to the triple bond $-C\equiv N$ which could be possibly expected (in analogy to the data of Ref. 7, R. Calas et al. Compt. rend. 252, 420 (1961)), did not occur. Addition of $(C_2H_5O)_3SiH$ to acrylonitrile was achieved neither at atmospheric nor at elevated pressure in the presence of catalysts and other substances (in glass ampullas at 150 - 180°C); whereas acrylonitrile was polymerized and triethoxy silane disproportionated, or the initial substances remained unchanged. The ω -cyano-alkyl-triethoxy silanes produced were hydrated to the relevant primary amines in the presence of Co or Ni skeleton catalysts under pressure according to the previously described methods (A. D. Petrov et al. Dokl. AN SSSR, 129, 1064 (1959); L. Kh. Freydlin et al. Izv. AN SSSR, Otd. khim. n. 10, 1878 (1960); V. N. Vdovin et al., author's certificate, SSSR 133683: Byull. izobreteniy SSR 23 (1960)) (Table 2). It has been found that the catalyst type and the structure of the nitrile have a remarkable effect on the yield in primary amine. The reaction was more selective in the presence of Co catalysts than of Ni catalysts. The yield in amine was higher on hydration of ω -cyano-alkyl-triethoxy silane than on reduction of β -cyano-alkyl-triethoxy silane. It has been established that hydration of ω -(di-, tri-, or tetra-alkoxy)-alkyl-(di-, tri-, or tetra-alkoxy)silanes to the relevant

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Addition of alkoxy silane hydrides...

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primary α, ω -diamines is possible (Table 3). The α, ω -dinitriles mentioned were formed as by-products of etherification of ω -cyano-alkyl-trichloro-silanes. There are 3 tables and 12 references: 5 Soviet and 7 non-Soviet. The three most recent references to English-language publications read as follows: Ref. 3: L. H. Sommer et al. J. Amer. Chem. Soc. 79, 2764 (1957); Ref. 6: V. B. Jex, J. Mc Mahon, US-Patent 2907784; Chem. Abstr. 54, 4388 (1960); Ref. 11: B. V. Aller, J. Appl. Chem., 7, 130 (1957). X

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: June 19, 1964

Table 1 Properties of organosilicon nitriles and dinitriles.
Legend: (1) boiling point (p, mm Hg); (2) found; (3) calculated.

Table 2 Catalytic hydration of alkyl-cyano silanes in the presence of

Table 3

88571

S/020/61/136/001/019/037
B016/B055

5.3700

AUTHORS: Vdovin, V. M., Pushchevaya, K. S., Belikova, N. A.,
Sultanov, R., Flate, A. F., and Petrov, A. D., Corresponding
Member AS USSR

TITLE: Derivatives of Silanes With Hydrocarbon Bridges Between the
Si Atoms. The Polymerization of 1,1-Dimethyl Silicocyclo-
pentane

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 1, pp. 96-99

TEXT: The authors studied the effect of aluminum halides (AlCl_3 and
 AlBr_3 on 1,1-dimethyl silicocyclopentane. They regard the latter as a
bridge compound in which both ends of the organic radical -R- are attached
to the same silicon atom. Experimental results confirmed the authors
assumption that, under the influence of AlX_3 , the $\equiv\text{Si} - (\text{CH}_2)_4$ bonds would
be more reactive than the $\equiv\text{Si} - \text{CH}_3$ bonds. As expected, this lead to
formation of a reactive radical $-\text{Si}(\text{CH}_3)_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$, and in the presence

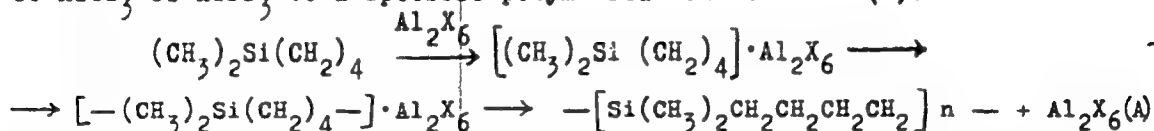
Card 1/3

Derivatives of Silanes With Hydrocarbon Bridges
Between the Si Atoms. The Polymerization of
1,1-Dimethyl Silicocyclopentane

88571

S/020/61/136/001/019/037
B016/B055

of AlCl_3 or AlBr_3 to a specific polymerization reaction (A):



This reaction is very rapid if the silane and the catalyst are heated for a short time. The authors verified the structure of this product by synthesizing it from corresponding fragments (B). Infrared spectroscopy proved these two products to be identical. Differences between the spectra of these two polymers and that of the monomer are explained by the spacial position of the carbon chains (isomerism). The authors thank Yu. P. Yegorov and Ye. D. Lubush for performing the spectroscopic analyses. Finally the authors discuss the polycondensation of 1,4-ditrimethyl disilyl butane. The reaction product was a colorless, rubbery insoluble polymer similar to the polymerization product obtained in reaction (A). There are 1 figure and 6 Soviet references.

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Derivatives of Silanes With Hydrocarbon Bridges S/020/61/136/001/019/037
Between the Si Atoms. The Polymerization of B016/B055
1,1-Dimethyl Silicocyclopentane

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii
nauk SSSR (Institute of Organic Chemistry imeni N. D.
Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: October 1, 1960

Card 3/3

158170

2-051
S/020/61/138/004/011/023
B103/B203

AUTHORS: Vdovin, V. M., Sultanov, R., Lubuzh, Ye. D., and Petrov, A. D.,
Corresponding Member AS USSR

TITLE: Organosilicon compounds with hydrocarbon bridges between the
silicon atoms. Alkylation of ω -cyano-alkyl trimethyl silanes
by means of halogen methyl trimethyl silanes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 4, 1961, 831-834

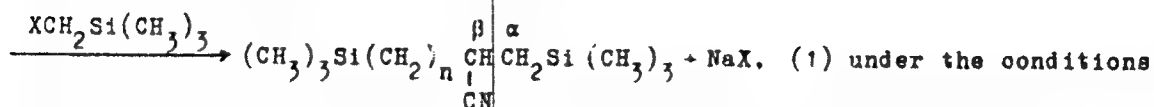
TEXT: The authors studied the production of bridge disilanes
(CH₃)₃Si-R-Si(CH₃)₃ containing a cyano group in the hydrocarbon radical R.
Such disilanes may be used for producing various polymers. These compounds
have so far been obtained with difficulty. The authors point out that the
cyano group bound to the β -carbon atom (with respect to Si) can be trans-
formed into various functional groups without separating the cyano-alkyl
radical from the Si atom. The reaction was conducted according to the

scheme $(CH_3)_3Si(CH_2)_nCH_2CH \xrightarrow[\text{ether}]{Na} [(CH_3)_3Si(CH_2)_nCH(Na)CN]$

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Organosilicon compounds with hydrocarbon...

24051
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B103/B203



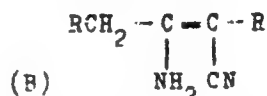
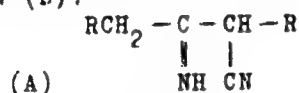
of alkylation of acetonitrile, where n is 1 or 2, and X is Cl, Br, or I. The structure of the compounds obtained was studied by their infrared spectra. The frequency 2238 cm^{-1} of disilane nitriles lies in a region characteristic of the cyano group, but is a little lower than its value in ω -nitriles $(\text{CH}_3)_3\text{Si}(\text{CH}_2)_n\text{CN}$ (for n = 2 and 3, 2249 cm^{-1}). This may well be reconciled with the reduction of the frequency of an electronegative group with increasing branching of the radical bound to this group. Besides, the structure of the compounds produced was confirmed by their transformation into ketones. The highest nitrile yield was obtained according to reaction (1) for $(\text{CH}_3)_3\text{SiCH}_2\text{I}$ (about 40 %). In the case of $(\text{CH}_3)_3\text{SiCH}_2\text{Cl}$, the disilane nitrile yield was lowest (about 20 %). In parallel to reaction (1), numerous by-products were formed which corresponded to the dimer of the initial β -cyano-ethyl trimethyl silane. The dimerization of silicon-

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Organosilicon compounds with hydrocarbon...

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B103/B203

free nitriles under the action of sodium is known, and was confirmed by an additional experiment. From the two structures ascribed to such dimers, (A) and (B):



the authors choose (B) on the basis of spectral data, where $\text{R} = -\text{CH}_2\text{Si}(\text{CH}_3)_3$.

Here, they find the frequency 2201 cm^{-1} (apparatus MKC-12, IKS-12) which they consider to be that of the valency group $-\text{C}\equiv\text{N}$. This frequency is reduced, apparently owing to a chain of conjugate groups. The frequencies

3400 and 3448 cm^{-1} correspond to the symmetric and asymmetric stretching vibrations of the NH_2 group. In the infrared spectrum of the solution of

this substance in CCl_4 , the frequency 1630 cm^{-1} is characteristic of the $-\text{C}=\text{C}$ bond. The ultraviolet spectrum of this substance showed an intensive frequency $248 \text{ m}\mu$ ($E = 46500$). In the alkylation of the ω -nitrile of the type $\text{NC}-\text{CH}_2-\text{CH}_2-\text{O}-(\text{CH}_2)_3\text{Si}-(\text{CH}_3)_3$, a different reaction occurred:

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Organosilicon compounds with hydrocarbon.

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γ -hydroxy-propyl-trimethyl silane and an acrylonitrile polymer were formed. In a control test (without $\text{XCH}_2\text{Si}(\text{CH}_3)_3$), a γ -alcohol was also formed according to scheme (4) (a = ether, b = polymer). Decomposition of the systems $-\text{Y}-\text{C}-\text{C}-\text{C}-\text{M}$ (Y - electronegative, M - electropositive atom) was thoroughly studied by A. N. Nesmeyanov and co-workers (Ref. 14: Izbr. tr. (Selected papers), Izd. AN SSSR, 1959, p. 549, 678, 684), and is a characteristic of these systems if M is a metal. In a special experiment, the authors found that the alcoholate $(\text{CH}_3)_3\text{Si}(\text{CH}_2)_3\text{ONa}$ formed in the reaction did not react with $\text{XCH}_2\text{Si}(\text{CH}_3)_3$ under given conditions. There are 1 table and 18 references: 10 Soviet-bloc and 8 non-Soviet-bloc. The three references to English-language publications read as follows: Ref. 8: S. Nozakura, S. Konotsune, Bull. Chem. Soc. Japan, 29, No. 3, 322 (1956); ibid., 29, No. 3, 326 (1956); Ref. 10: R. A. Shaw, J. Chem. Soc., 1956, 2779; Ref. 11: H. Adkins, J. Whitman, J. Am. Chem. Soc., 64, 150 (1942).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

Card 4/5

APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653910014-1

S/020/62/145/004/011/029
B110/B101

11.9200
AUTHORS:

Petrov, A. D., Corresponding Member AS USSR, Vdovin, V. M., and Sultanov, R.

TITLE:

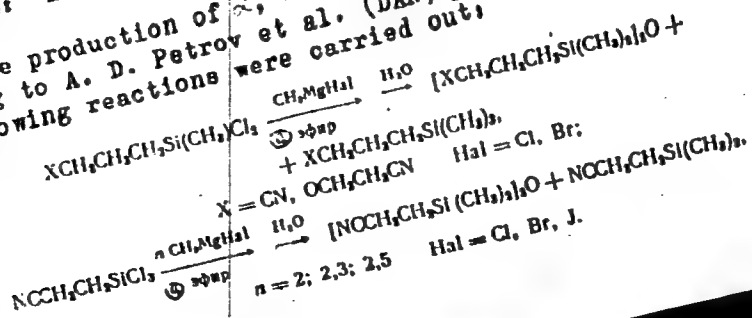
Synthesis and conversions of α,ω -di-(alkyl cyanide) tetramethyl disiloxanes

PERIODICAL:

Akademiya nauk SSSR. Doklady, v. 143, no. 3, 1962, 606-609

TEXT:

The production of α,ω -di-(alkyl cyanide)-tetramethyl siloxanes according to A. D. Petrov et al. (DAN, 128, no. 6 (1959)) was studied. The following reactions were carried out:

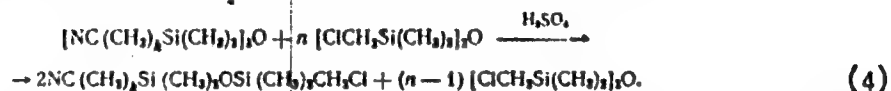


Card 1/4

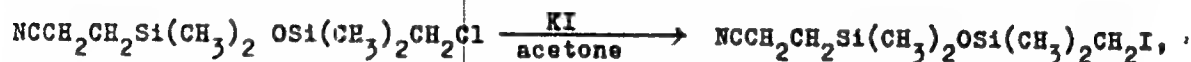
Synthesis and conversions of ...

S/020/62/143/003/019/029
B110/B101

produced were highly viscous liquids. Their viscosity index was close to that of dimethyl polysiloxanes. In a similar way, disiloxanes with reactive CN-alkyl- and Cl-alkyl groups were obtained:



At $n = 7$ chloro nitriles with 70-90% yield were obtained. According to:



the iodide was produced with 83% yield. There are 2 tables. The most important English-language reference is: M. Prober, J. Am. Chem. Soc., 77, 3224 (1955).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

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Synthesis and conversions of...

SUBMITTED: December 11, 1961

S/020/62/143/003/019/029
B110/B101

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ACCESSION NR: AP4022012

S/0249/63/019/012/0025/0031

AUTHORS: Sadykh-Zade, S. I.; Sultanov, R.; Gasanova, F. A.

TITLE: The incorporation of hydrosilicones into glycidolallyl ester and some transformations of the obtained additional products (Presented by Academician A. M. Kuliyev of the Azerbaydzhan Academy of Sciences)

SOURCE: AN AzerbSSR. Doklady, v. 19, no. 12, 1963, 25-31

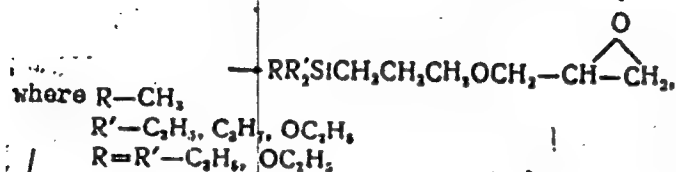
TOPIC TAGS: epoxides, epoxy derivative, glycidol, glycidolallyl ester, silane hydrosilicone, alkylsilicone, trialkylsilane, alkoxy silane, catalyst, chloroplatinic acid, organosilicon compound, alkene

ABSTRACT: A method presented here permits the synthesis of siloxanes by catalytic incorporation of silanes and disilanes into glycidolallyl ester. It was shown that trialkylsilanes, alkoxy silanes, and disilanes of the $HR'RSiOSiRR'H$ type are readily linked to glycidolallyl ester at atmospheric pressure in the presence of chloroplatinic acid, according to the reaction



Card 1/3 =

ACCESSION NR: AP4022012



Eleven new organosilicon compounds were synthesized. The process is exemplified by the technique of gamma-glycidol-oxypropyltriethylsilane synthesis. In a flask provided with a reflux condenser and a thermometer were placed 23.5 gm of freshly distilled glycidolallyl ester. The flask was then heated to 90C, and to it were added 3 drops of a 0.1 normal solution of chloroplatinic acid in isopropyl alcohol, followed by gradual admixture of 21.6 gm of triethylsilane. When 6 ml of $(\text{C}_2\text{H}_5)_2\text{SiH}$ were added, the temperature rose spontaneously to 130C. After the non-reacted components were removed by vacuum distillation, 16.4 gm of the desired compound were produced. Boiling point of this compound was 120-121C.

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- 12 (2/235) -

ACCESSION NR: AP4022012

It was established that the trialkylsilanes were linked to the glycidolallyl ester according to Farmer's law. Orig. art. has: 13 formulas and 1 table.

ASSOCIATION: INKhp im. Yu. G. Mamedaliyeva (INKhp)

SUBMITTED: 13Nov63

DATE ACQ: 08Apr64

ENCL: 00

SUB CODE: CH

NO REF SOV: 006

OTHER: 000

Card 3/3

SADYKHAEV, S.I.; SULTANOV, R.; KHALILOVA, E.M.

Addition of silicon hydrides to β -propargylhydroxy
propionitrile. Azerb. khim. zhur. no.1:57-62 '64.

(MIRA 17:5)

KHALILOVA, S.M.; SULTANOV, R.; SADYKHLADE, S.I.

Synthesis of silicon-containing unsaturated acetates.

Azerb. khim. zhur. no.1:97-103 '64.

(MIRA 17:5)

SADYKH-ZADE, S.I.; SULTANOV, F.; GASANOVA, F.A.; BOKOVY, A.P.;
LITVINOVA, O.V.; PONOMARENKO, V.A.

Synthesis of epoxyaminoorganosilanes. Dokl. AN Azerb. SSR 20
no. 6:25-27 '64. (MIRA 17:9)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.
Predstavleno akademikom AN AzerSSR M.A.Dalinyam.

1971-55 EWG(j)/EWT(m)/EWF(c)/EPP/ENP(j)/T/ENP(t)/ENP(b) Pc-4/Pr-4/
 s-4 IJP(c) RM/UD
 ACCESSION No. AP4049802 S/0316/64/000/004/0047/0053

AUTHOR: Gasanova, F. A.; Sultanov, R.; Sady*khzade, S. I.

TITLE: Synthesis of silicon-containing chlorohydrins and their oxides

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 4, 1964, 47-53

TOPIC TAGS: silicon chlorohydrin, silicon hydride, silane, silicon chlorohydrin oxide

ABSTRACT: This is a continuation of previous work by the same authors on methods of synthesizing silico-olefin oxides. It was found that silicon hydrides and dihydrides, in the presence of platinum catalysts, readily react with 3-allyloxy-1-chloropropanol-2 and glycidallyl ether forming the corresponding silicon-containing chlorohydrins and their oxides. By verifying the structure of these compounds with the aid of the opposite synthetic reaction it was proven that silicon hydrides under the above conditions become bonded to 3-allyloxy-1-chloropropanol-2 and to the glycidallyl ether only at the C-C double bond, according to Farmer's rule. The best yields of silico-organic oxides are obtained by directly compounding silicon hydrides with glycidallyl ether rather than with 3-allyloxy-1-chloropropanol-2 with subsequent dehydrochlorination. The following compounds were synthesized: sym-di-(gamma-glycidoxypropyl)-dimethyldiethyldisiloxane;

Card 1/2

L 19732-65

ACCESSION NR: AP4049802

3-methyldipropylsilylpropoxy-1-chloro-2-trimethylsiloxypropane; 3-methyldiethylsilylpropoxy-1-ethoxypropanol-2; 3-methyldiethylsilylpropoxy-1-diethylaminopropanol-2; 2-methyl-2-ethyl-4-methyldiethylsilylpropoxy-methyldioxolan-1,3; 3-methyltetramethylenesilylpropoxy-1-chloropropanol-2; 3-methyltetramethylenesilyl-1-glycidoxypropane; and 3-triethylsilyl-1-glycidoxypropane. Orig. art. has: 8 chemical formulas and 1 table.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: OC

NO REF SOV: 004

OTHER: 000

Card

2/2

L 11325-65 ENT(m)/EPF(c)/ZNP(j)/T Pc-4/Pr-4 RPL DJ/RM
 S/0249/64/020/006/0025/0027
 ACCESSION NR: AP4045056

AUTHOR: Sady*kh-Zade, S. I.; Gasanova, F. A.; Sultanov, K. I.
 Bokovoy, A. P.; Litvinova, O. V.; Ponomarenko, V. A. B

TITLE: Synthesis of [(epoxyamino)organo]silanes 1

SOURCE: AN AzerbSSR, Doklady*, v. 20, no. 6, 1964, 25-27

TOPIC TAGS: silicone, silane, organosilicon compound

ABSTRACT: A study of the synthesis of organosilicon monomers containing epoxy groups in organic substituents on silicon has been continued. The feasibility was shown of synthesizing [(epoxyamino)organo]silanes by addition of alkyl(alkoxy)silanes to akenylepoxyamines in the presence of chloroplatinic acid. Twelve [(epoxyamino)organo]silanes were prepared in 8-57.9% yields; their physical constants are tabulated in the original article. Most of the new compounds polymerize on standing. Their polymerization properties will be described in a separate paper. Addition of 1,3-diethyl-1,3-dimethyldisiloxane to diallylepoxyamine in the presence of chloroplatinic acid formed in quantitative yield a viscous oil polymer which sets on standing.

Card 1/2

L 11325-65

ACCESSION NR: AP4045056

[$C_{15}H_3Si_2O_2N$]; the average molecular weight is 1780. Orig. art. has: 1 table and 10 formulas.

ASSOCIATION: Institut neftekhimicheskikh protsessov (Institute of Petrochemical Processes)

SUBMITTED: 25Feb64

ATD PRESS: 3106

ENCL: 00

SUB CODE: OC, IC

NO REF SOV: 005

OTHER: 001

Card 2/2

L 24688-65 ENT(m)/EFF(c)/ENP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP4049426

S/0316/64/000/001/0097/0103

AUTHOR: Khalilova, E. M.; Sultanov, R.; Sadykhzade, S. I.

TITLE: Synthesis of silicon-containing unsaturated acetates

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 1, 1964, 97-103

TOPIC TAGS: acetate, unsaturated acetate, silicon containing acetate

ABSTRACT: Silicon-containing acetates and diacetates were prepared by reacting silicon hydrides with unsaturated compounds containing functional groups at atmospheric pressure in the presence of 0.1 N H_2PtCl_6 in isopropyl alcohol as a catalyst. The acetates and their properties are listed in two extensive tables which include the structural formula and data on boiling point, yield and elemental analysis. Under these experimental conditions, the Si hydrides add at the triple bond, which is not in accord with Markovnikov's rule. Orig. art. has: 1 figure, 2 tables and 14 chemical structures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: OC

Card 1/1 NO REF SOV: 006

OTHER: 002

L 38518-65 EPF(c)/EMP(j)/ENL(c)/ENL(m)/T Pc-h/Pr-h RPL RM/JW

ACCESSION NR: AP5007804

S/0316/S4/000/002/0097/G102

24

AUTHOR: Sultanov, R.; Khalilova, E. M.; Sadykhzade, S. I.

TITLE Synthesis of unsaturated silicon-containing amines:

SOURCE: Azerbaydzhanskiy khudozhestvennyy zhurnal, no. 2, 1964, 97-102

TOPIC TAGS: unsaturated amine, heteroorganic compound, organosilicon compound, amine synthesis, alkoxysilane propargylamine, acetylenic amine, Grignard reagent, decyanoethylation

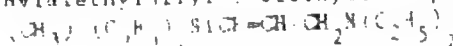
ABSTRACT: A route was developed for the synthesis of olefinic silico-organic polymers by addition of alkyl- or alkoxy-silanes to diethylpropargylamine or

The physical properties and

The silanes

and diethylpropargylamine gave dimethyldiethylsilyl-1-diethylaminopropen-1

$(CH_3)_2Si(CH_2CH=CHN(C_2H_5)_2)$



Card 1,2

L 38518-65

ACCESSION NR: AP5007804

and the reaction of silane isomers gave 1-methyltetramethylenesilyl-, 1-triethylsilyl-, 1-methyldipropylsilyl-, 1-ethyldipropylsilyl-, 1-methyldiethoxy- and 1-ethoxyethyl-1-dichloroaminopropenyl. By reaction of alkyl- or ethoxyethyl-1-dichloroaminopropenyl with 1-methyldiethylsilyl-, 1-methyldipropylsilyl-, 1-ethyldipropylsilyl-, 1-methyldiethoxy- and 1-ethoxyethyl-1-dichloroaminopropenyl.

(CH₃)₂(C₂H₅)₂SiCH=CH-CH₂N(CH₂CH₂CN)CH₂CH=CH₂
1-methyltetramethylenesilyl-, 1-triethylsilyl-, 1-methyldipropylsilyl-, 1-ethyldipropylsilyl-, 1-methyldiethoxy- and 1-ethoxyethyl-1-dichloroaminopropenyl.
1-methyltetramethylenesilyl-, 1-triethylsilyl-, 1-methyldipropylsilyl-, 1-ethyldipropylsilyl-, 1-methyldiethoxy- and 1-ethoxyethyl-1-dichloroaminopropenyl.

ASSOCIATION None

SUBMITTED: 00

ENCL: 00

SUB CODE: 0C

NO REF SOV: 002

OTHER: 000

Card 2/2 *msB*

L 40552-15 BY7(-)/BPF(c)/STP(f)/DTA(c) P-4/P-4 GS/RM
 ACCESSION NR: AT5002121 S, 0000/64/000/000/0130/0134

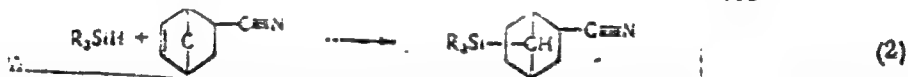
AUTHOR: Sultanov, R., Vdovin, V. M.

TITLE: Cyano-containing silico-organic compounds

SOURCE: AN SSSR. Institut neftekhimicheskogo sinteza. Sintez i svoystva monomerov
 Synthesis and properties of monomers. Moscow, Izdat. Nauka, 1964, 130-134

TOPIC TAGS: heteroorganic compound, silicoorganic compound, cyanide, cyanoolefin,
 hydrosilane, siliconitrile

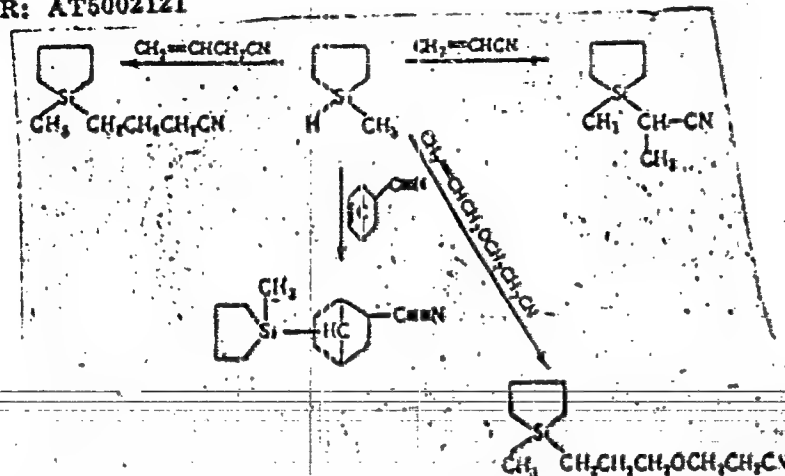
ABSTRACT: Pt/C catalysts with 5 or 20% Pt and a 0.1 N solution of H_2PtCl_6 in isopropyl
 alcohol were used as the catalysts in the reaction of introducing hydrosilanes with cyano-
 containing olefins (a) and derivatives of silicon-containing nitriles (b), and in the reaction
 of 1-hydro-1-methylsilicocyclopentane with cyano-containing olefins (c):



Card 1/3

L 40558-65

ACCESSION NR: AT5002121



(3)

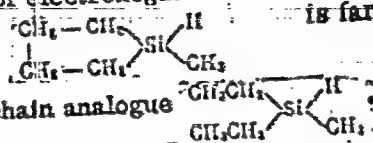
As a result of the study, a great number of new cyano-alkyl monomers with 1, 2 or 3 hydrolizable groups on the silicon atom were prepared, unidentified individually in the paper, and observations were made that: 1) all the hydrosilanes investigated combine to produce $>\text{C}=\text{C}<$ multiple bonds; 2) cyano-containing olefins with an isolated primary

Card 2/3

L 40558-65

ACCESSION NR: AT5002121

double bond react more actively with hydrosilanes of all types; 3) the hydrosilanes combine with cyano-allyl less actively as the number of electronegative substitutes at the silicon atom diminishes; and 4) the cyclic hydride is far more active



toward all the studied nitriles than its open-chain analogue The synthesis of a silicon-substituted acrylonitrile by bromination and subsequent dehydrobromination of β -cyanoethyltrichlorosilane is briefly reported. Orig. art. has: 9 formulas.

ASSOCIATION: None

SUBMITTED: 30Jul64

NO REF SOV: 011

ENCL: 00

SUB CODE: OC

OTHER: 004

Card 3/3

SP2

SADYKH-MADE, S.I ; SMITANOV, B.; MAMEDOVA, B.A.

Addition of triorganosilanes to vinyl ethynyl- α -furylcarbinol.
Dokl. AN Azerb. SSR 21 no.2:23-27 '65.

(MIPA 18:5)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

L 61507-65 ENT(m) JAJ/EM
ACCESSION NR: AP5012869

U2/0249/65/021/002/0023/0027
179

AUTHORS: Sadykh-Zade, S. I.; Sultanov, E.; Mamedova, B. A.

TITLE: Addition of triorganosilanes to vinyl ethynyl- α -furylcarbinol B

SOURCE: AN AzerbSSR. Doklady, v. 21, no. 2, 1965, 23-27

TOPIC TAGS: silane, esterification, polymer, furane compound

ABSTRACT: Reaction between vinyl ethynyl- α -furylcarbinol (A) and methyltetramethylenesilane in the presence of Pt/C (20% Pt) gave a 50% yield of 1-(α -furyl)-3-methyltetramethylenesilylpentadiene-2,4-di-1 (I) boiling point at 154-156/3 mm Hg; n_D^{20} - 1.5430; d_4^{20} - 1.0384; molar ref. calculated - 75.04, molar ref exp 75.40. Reaction between A and triethylsilane in the presence of H_2PtCl_2 and hydroquinone (reaction scheme 2) gave 48.5% yield of 1-(α -furyl)-3 triethylsilylpentadiene-2,4-di-1. (II) boiling point at 135-136/1.5 mm Hg. n_D^{20} = 1.5202; d_4^{20} = 0.9831; molar ref calculated 81.44; molar ref exp 81.80. Reaction between A and methyldiethylsilane (following scheme 2) gave 48% yield of 1-(α -furyl)-3-methyldiethylsilylpentadiene-2,4-di-1. Boiling point at 128-130/1 mm Hg; n_D^{20} -

Card 1/2

L 61507-65

ACCESSION NR: AP5012869

2

1.5202; d_4^{20} - 0.9953; molar ref cal 76.93; molar ref exp 76.62. Reaction between A and methyldipropylsilane (following scheme 2) gave 42% yield of 1-(α -furyl)-3-methyldipropylsilylpentadiene 2,4-ol-1. Boiling point at 142-144/1 mm Hg; n_D^{20} - 1.5108; d_4^{20} - 0.9655; molar ref calculated 86.43; molar ref exp 86.37. Reaction between 1-(α -furyl)-3-methyldiethylsilylpentadiene 2,4-ol-1 and potassium acetate, acetic anhydride in dry benzene gave a 53% yield of 1-(α -furyl)-1-acetoxy-3-methyldiethylpentadiene 2,4; boiling point at 121-122.5/1.5 mm Hg; n_D^{20} - 1.5149; d_4^{20} - 1.0240, molar ref calculated 86.41; molar ref exp 86.10. The authors thank I. G. Ismail-Zade for determining the IR spectra. Orig. art. has: 6 formulas.

ASSOCIATION: Institut neftekhimicheskikh protsessov (Institute for Petrochemical Processes)

SUBMITTED: 10 Apr 64

ENCL: 00

SUB CODING: 00

NO REF SOV: 004

OTHER: 002

Card

282
2/2

L 51524-65 EMT(m)/EPF(c)/IPR/EMI(j)/T PC-4/Pr-4/Ps-4 RM/KW
 UR/0286/65/000/009/0068/0068
 678.621'375

ACCESSION NR: AP5015298
 35
 B
 AUTHOR: Kamenskiy, I. V.; Sadykh-zade, S. I.; Guseynov, D. A.; Iskenderov, M. A.;
 Sultanov, R. A.; Mamedov, F. V.

TITLE: A method for producing resin. Class 39, No. 170670 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 68

TOPIC TAGS: resin, amine, thermal stability, polycondensation, furfural 15

ABSTRACT: This Author's Certificate introduces a method for producing resin by
 polycondensation of furfural and amine. The thermal and chemical stability of the
 product are improved by using allylamine. 15

ASSOCIATION: none

SUBMITTED: 21May64

NO REF SOV: 000

Card 1/1

ENCL: 00

SUB CODE: ME, GC

OTHER: 000

L 1900-66 EWT(m)/EPF(c)/EWP(j)
ACCESSION NR: AP5021552

RM

UR/0286/65/000/013/0019/0019
661.718.1.5

AUTHOR: Sadykh-Zade, S. I.; Sultsnov, R. A. o.; Mamedova, B. A. k.; Ashurov, B. A. o.

TITLE: Preparative method for unsaturated organosilicophosphorus compounds.
Class 12, No. 172320

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 19

TOPIC TAGS: organosilicon compound, organophosphorus compound, organic synthesis

ABSTRACT: An Author Certificate has been issued for a preparative method for unsaturated organosilicophosphorus monomers having hydrolyzable substituents at the silicon atom. Dialkyl propargylphosphonates are refluxed with alkyl(alkoxy)silanes in the presence of chloroplatinic acid. [SM]

ASSOCIATION: Institut neftekhimicheskikh protsessov AN Azerbaydzhanskoy SSR
(Institute of Petrochemical Processes, AN Azerbaydzhans SSR)

SUBMITTED: 23Apr64

NO REF SOV: 000

Card 1/1

ENCL: 00
OTHER: 000

SUB CODE: OC, IC
ATD PRESS: 4088

3941007, P.A.; 3941008, P.A.; 3941009, P.A.

16. (MIRA 18:11)

1. Institut neftekimicheskih protsessov imeni Yu.G.Mamedaliyeva
AZ, Azerbaydzhanskoy SSR, Baku.

SULTANOV, R. G.

Tr., Azerbaydzhan Affil., Acad. Sci., -1944-. "Prospects of the Coal Deposits of Azerbaydzhan," Dok. AN, 43, No. 3, 1944; "On the Phosphorite Occurrences in the Caucasus," ibid., 45, No. 8, 1944.

in 4.

Phosphorite occurrences in the Caucasus. R. G. Sultanov, (Compt. rend. Acad. Sci. U.R.S.S., 1944, 48, 343-348).--Phosphorite deposits at Kasimbent, South Daghestan, are described C. R. H.

CA

The phosphorite occurrences in the Caucasus R.G.
Sultanov, *Doklady Akad. Nauk S.S.R.* 45, 1965 p.
Chim. i med. geol. ser. U.R.S.S. 45, 1158(1944) in
English). J.W. Perry

INTERNAL INDEX

ASB-SEA METALLURGICAL LITERATURE CLASSIFICATION

SECTION	SUBSECTION	CATEGORY	CLASSIFICATION
1000000000	1000000000	1000000000	1000000000

SULTANOV, R.G.

Denudation surfaces on the southern slope of the Greater Caucasus.
Uch. zap. AGU no.7:37-43 '55. (MLRA 9:12)

(Caucasus, Northern--Erosion)

SULTANOV, Ramiz.

~~History of the geological development of the Baku Archipelago~~
History of the geological development of the Baku Archipelago
area during the Pliocene and Pleistocene. Uch. zap. AGU no.9:
25-33 '56. (MIRA 10:4)
(Baku Archipelago--Geology, Stratigraphic)

SULTANOV, R.G.; GASANOV, M.M.

Origin of swamps in the Azerbaijan S.S.R. Uch. zap. AGU no.9:
33-36 '55. (MLRA 9:11)

(Azerbaijan--Peat bogs)

SULTANOV, R.G.

Tectonic characteristics of the Baku Archipelago. Dokl. AN Azerb.
SSR 11 no.6:385-388 '55. (MLRA 9:6)

1. Institut geologii imeni akademika I.M. Gubkina AN Azerbaydzhansko-
skoy SSR. Predstavleno deystvitel'nyy chlenom AN Azerbaydzhanskoy
SSR m.a. Kashkayev.
(Baku Archipelago--Geology, Structural)

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 12,
p 52 (USSR) 15-1957-12-17065

AUTHOR: Sultanov, R. G.

TITLE: The Relation Between the Boundary at the Southern Slope
of Bol'shoy Kavkaz (Great Caucasus) and the Adjoining
Alazani-Avtaran Valley in Azerbaydzhan (O kharaktere
sopryazheniya granitsy yuzhnogo sklona Bol'shogo Kavkaza
s primykayushchey Alazano-Avtaranskoy podgornoy dolinoy
v Azerbaydzhan)

PERIODICAL: Dokl. AN AzerbSSR, 1955, vol 11, Nr 9, pp 617-622

ABSTRACT: Bibliographical entry

Card 1/1

15-57-7-10046

The Geologic Structure (Cont.)

The Akchagyl deposits border the crest in a narrow band, and the Apsheron rocks form the limbs and quaquaversal dipping beds of the fold. Petrographic study of the rocks of the Produktivnyy series has shown that these rocks belong to the pyroxene-hornblende series of the Pirsagat section.

Card 2/2

R. G. Garetskiy

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,
p 194 (USSR) 15-57-7-10045

AUTHOR: Sultanov Ramiz

TITLE: The Geologic History of the Development of the
Region of the Baku Archipelago in the Pliocene and
Post-Pliocene (Istoriya geologicheskogo razvitiya
rayona Bakinskogo arhipelaga v pliotsene i post-
pliotsene --In Azerbaydzhan)

PERIODICAL: Uch. zap. Azerb. un-t, 1956, Nr 9, pp 25-33

ABSTRACT: A large amount of data is treated; these data were
obtained by drilling, gathered from mud-volcano
ejecta, and observed directly during field work.
This material has permitted the author to decipher
the paleo-geographic conditions of sediment accumu-
lation in the region of the Baku Archipelago in the
Caspian Sea, beginning at the age of the Produktivnyy

Card 1/3

15-57-7-10045

The Geologic History of the Development (Cont.)

are found in deposits of almost all the series formed during this interval. The author furnishes paleogeographic maps.

3/3

V. G. Rikhter

15-57-12-17204

Dacites and Andesites in the Belokany Region (Cont.)

fault zone in Apsheron time or somewhat later. After these intrusions, but before the Quaternary, there was a time of hydrothermal activity and quartz veins were formed, cutting the dacites and andesites, and, probably, giving rise to the thermal springs in this region (at the village of Elisu and others). The dacites are apparently derivatives of the granodiorites in the upper reaches of the Akhtychay.

Card 2/2

O. V. Bryzgalin

SULTANOV, Ramiz.

Gas resources of the Apsheron stage deposits in the Baku Archipelago
[in Azerbaijani with summary in Russian]. Uch. zap. AGU no.4:77-81
'57. (MIRA 11:1)

(Baku Archipelago--Gas, Natural)

SULTANOV, R.G.

Some volcanic rocks in the southern slope of the
Caucasus in Azerbaijan. Uch.zap.AGU. Geol.-geog. ser.
no.1:11-22 '59. (MIRA 15:12)
(Azerbaijan--Rocks, Igneous)

SULTANOV, R.G.; DADSHEV, F.G.

Periodicity of the eruptions of the mud volcanoes in Azerbaijan.
Uch.zap.AGU.Geol.-geog.ser. no.3:55-61 '60. (MIRA 14:6)
(Azerbaijan--Mud volcanoes)

SULTANOV, Ramiz

Geology of the anticlinal zone of the Khamandag, Kornilov-Pavlov
shoal field. Trudy Inst.geol.AN Azerb.SSR 20:155-173 '60. (MIRA 14:9)
(Khamandag--Petroleum geology)

AKHMEDOV, G.A.; ZEYNALOV, M.M.; SULTANOV, R.G.; TAGIYEV, E.A.

Correlating cross sections of the producing formation in the
Apsheron Peninsula and southeastern Kobystan. Uch.zap. AGU.
Geol.-geog.ser. no. 4:81-88 '60. (MIRA 15:9)
(Apsheron Peninsula--Geology, Stratigraphic)
(Kobystan--Geology, Stratigraphic)

SULTANOV, R.G.; GADZHIYEV, M.P.

Ancient glaciation of the northeastern slope of the Lesser Caucasus.
Trudy Tbil.NIGMI no.9:144-147 '61. (MIRA 15:3)

1. Institut geografii AN Azerbaydzhanskoy SSR.
(Azerbaijan--Glaciers)

SULTANOV, R.G.; GUSEYNOV, A.A.; GADZHIYEV, M.P.

Peat deposits in Kedabek District, Azerbaijan. Dokl. AN Azerb. SSR
17 no. 2:125-129 '61. (MIRA 14:4)

1. Institut geologii AN Azerbaydzhanskoy SSR. Predstavleno akademikom
AN Azerbaydzhanskoy SSR V.R. Volobuyevym.
(Kedabek District—Peat)

SULTANOV, R.G.; PASHALY, I.V.

Genetic conditions and features of the distribution of mineral
springs in Kedabek District. Dokl. An Azerb. SSR 17 no. 5: 395-
399 '61. (MIRA 14:6)

1. Institut geografii AN Azerbaydzhanskoy SSR. Predstavleno
akademikom AN Azerbaydzhanskoy SSR Sh. F. Mekhtiyevym.
(Kedabek District—Springs)

SULTANOV, R. G.; GADZHIYEV, M. P.

Quaternary sediments in the Shamkhorchay-Dzegamchay inter-
fluve. Uch. zap. AGU. Geol.-geog. ser. no.1:15-23 '62.
(MIRA 16:1)

(Shamkhorchay Valley—Geology)
(Dzegamchay Valley—Geology)

... M ...
... subgroup

... M Decomposition of primary groups in-

Prifer showed that a countable primary group G with

"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653910014-1

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APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653910014-1"

SULTANOV, R.M.

Direct sum expansion of an operator group. Uch.zap.AGU no.3:3-15
'55. (MLRA 9:12)

(Groups, Theory of)

SULTANOV, R.H.

The complete continuity of Urysohn's operator [in Azerbaijani with
summary in Russian]. Uch. zap. AGU no.2:19-25 '57. (MIRA 11:1)
(Operators (Mathematics))

32503

16.4150

S/044/61/000/011/026/049

C111/C444

AUTHORS: Krasnosel'skiy, M. A., Rutitskiy, Ya. B., Sultanov, R. M.

TITLE: On a non-linear operator, operating in spaces of abstract functions

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1961, 73.
abstract 11B397 (Izv. AN. Azerb. SSR. Ser. fiz. mat. i tekhn. n., 1959, no. 3, 15-21)

TEXT: Investigated are certain properties of the operator

$$fu(t) = f(t, u(t)) \quad (1)$$

which transforms a subset of a certain Banach space B into another Banach space B . One assumes that the abstract function $f(t, u)$ with values in B , is strongly measurable for every fixed $u \in B$, and that the operator $f(t, u)$ is strongly continuous with respect to u for almost all $t \in \Omega$; Ω is a bounded closed set of the finite dimensional Euclidian space. In the article it is proved that the theorems on the continuity and boundedness of the operator f which formerly have been proved for the spaces L^p , L^p_u of vector functions, for Orlicz spaces

Card 1/3

32503

S/044/61/000/011/026/049

C111/C444

On a non-linear operator, operating . .

etc., hold for broad classes of abstract function spaces. The concept of a " \mathcal{X} -space" is introduced as follows: Let B be the linear subspace of all measurable abstract functions $u(t)$ with values in the Banach space B ; let \tilde{B} be made a complete Banach space by aid of a certain norm $\| \cdot \|_{\tilde{B}}$. The space \tilde{B} is called " \mathcal{X} -space", if the following conditions are satisfied:

- 1.) There is $\| u \|_{\tilde{B}} = 0$ if and only if $u(t) = 0$ almost everywhere on Ω ;
- 2.) \tilde{B} contains all functions taking a constant value on Ω ;
- 3.) \tilde{B} contains together with the abstract function $u(\cdot)$ all functions $u(t) \chi_E(t)$, $\chi_E(t)$ being the characteristic function of the measurable set $E \subset \Omega$; there $\| u \chi_E \|_{\tilde{B}} \leq \| u \|_{\tilde{B}}$;
- 4.) Out of the condition $\| u \|_{\tilde{B}} \rightarrow 0$ there follows that the functions $u_n(t)$ converge to 0 with respect to the norm.

The authors investigate certain properties of the introduced \mathcal{X} -space under certain additional conditions and prove the continuity of the Card \mathcal{C}/\mathcal{C} .

L 15381 63

ENT(d)/FCC(w)/BDS--AFFTC/IJP(C)

ACCESSION NR: AR3004129

S/0044/63/000/005/B079/B080

SOURCE: RZh. Matematika, Abs. 5B318

AUTHOR: Sultanov, R. M.

TITLE: Investigation of the parameter dependence of the continuity of solutions of nonlinear integral equations 16

CITED SOURCE: Uch. zap. Azerb. un-t, Fiz-matem. i khim. ser., no. 6, 1960, 11-18

TOPIC TAGS: nonlinear integral equation, continuous solution, integral equation parameter, Banach space

TRANSLATION: The paper studies the continuity of the nonlinear integral equation

$$x(t) = x_0(t) + \int_{t_0}^t K[t, s, x(s), \lambda] ds \quad (1)$$

where $x = (x_1, x_2, \dots, x_n) \in E_n$, $(K = K_1, \dots, K_n) \in E_n$, $\lambda \in G$, G - number set containing the limiting point λ_0 . The author proposes the introduction of the following conditions: 1) The vector function $K(t, s, x, \lambda)$ is defined for $x \in S$ (S - Card 1/4

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open set in E_n), $t, s \in [t_0, T], \lambda \in G$. For given $x \in S, \lambda \in G$ the vector function K is measurable over $s \in [t_0, T]$ and there exists a function $M(t, s, \lambda)$, integrable over s according to Lebesgue in $[t_0, T]$, such that it obeys the inequality

$$\|K(t, s, x, \lambda)\|_{E_n} \leq M(t, s, \lambda) \quad (2)$$

for

$$(t, s, x, \lambda) \in [t_0, T] \times [t_0, T] \times S \times G. \quad (3)$$

Further, if $t_1 \in [t_0, T]$, then

$$\lim_{t \rightarrow t_1} \int_{t_1}^t K(t, s; x(s, \lambda), \lambda) ds = \int_{t_1}^{t_1} K(t_1, s; x(s, \lambda), \lambda) ds. \quad (4)$$

For $(t, s) \in [t_0, T] \times [t_0, T], \lambda \in G$, the vector function is continuous in x .

2) There exist a nondecreasing function $\psi(\delta)$ which is defined for

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$$0 < \delta < d \ (d > 0), \lim_{\delta \rightarrow 0} \psi(\delta) = 0$$

(5)

and a function integrable according to Lebesgue

$$x(t, s) > 1, \int_{t_0}^T x(t, s) ds < \text{const}$$

(6)

such that

$$\left\| \int_{t_0}^t [K(t, s, x_1, \lambda) - K(t, s, x_2, \lambda)] ds \right\|_{E_n} < \\ < \int_{t_0}^t \psi(\|x_1(s) - x_2(s)\|) x(t, s) ds$$

(7)

for

$$x_1, x_2 \in S, \|x_1 - x_2\| < d, t, s \in [t, T], \lambda \in G$$

(8)

3) If the function $v(t)$ is the solution of (1) for $\lambda = \lambda_0$ over $[t_0, T_1]$, $t_0 < T_1 \leq T$, $v(t_0) = x(t_0, \lambda_0)$, then $v(t) = x(t, \lambda_0)$ for $t \in [t_0, T_1]$.

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where $x(t, \lambda_0)$ is the solution of (1) for $\lambda = \lambda_0$ found for $t \in [t_0, T]$. ⁶

4) Let

$$\lim_{\lambda \rightarrow \lambda_0} \int_{t_0}^t K(t, s, x, \lambda) ds = \int_{t_0}^t K(t, s, x, \lambda_0) ds \quad (9)$$

be uniform with respect to t, x . In presence of the above conditions the author proved the following: Theorem 1. In presence of the conditions 1-4 for any $\eta > 0$ one can find a $\delta > 0$ such that for every solution $x(t, \lambda)$ of (1) found over $[t_0, T]$ and satisfying

$$\|x(t_0, \lambda) - x(t_0, \lambda_0)\| < \delta \text{ with } |\lambda - \lambda_0| < \delta \quad (10)$$

inequality

$$\|x(t, \lambda) - x(t, \lambda_0)\| < \eta \quad (11)$$

exists for $t \in [t_0, T]$. Similar results can be established within the Banach space. A. Guseynov.

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SULTANOV, R.M.

Differentiability of solutions of nonlinear integral equations
with respect to the parameter. Uch. zap. AGU. Ser. fiz.-mat.
i khim. nauk no.2:9-16 '61. (MIRA 16:7)

SULTANOV, R.S., inzh.

The D-451 semi-rotatable clamshell loader. Stroi.i dor.mash.
7 no.10:4-6 0 '62. (MIRA 15:11)
(Earthmoving machinery)

SULTANOV, R.S.

The KIaSh-60 plant hole digger. Trakt. i sel'khoz mash. 33 no.7:
34 J1 '63. (MIRA 16:11)

SULTANOV, R.S., inzh.

Improved model of the KPIA-100 hole digging machine. Trakt. 1
sel'khoz mash. 33 no.12:34 D '63. (MIRA 17:2)

SULTANOV, S.A., inzhener-geolog.

Main problems in the geological analysis of the Tuymazy fields
development. Trudy MNI no.12:176-184 '53. (MLRA 9:8)
(Tuymazy--Petroleum geology)

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MEKHTIYEV, S.D.; SULTANOV, S.A.

Conversion of isopropylcyclohexane into synthetic aluminum sili-
Dokl. AN Azerb. SSR 10 no.6:413-420 '54. (MIRA 8:10)

1. Institut nefiti Akademii nauk Azerbaydshanskoy SSR. Predstav-
leno deystvitel'nym chlenom Akademii nauk Azerbaydshanskoy SSR
M.F.Nagiyevym
(Aluminum silicates)

SULTANOV S. A.

Name: SULTANOV, S. A.

Dissertation: Analysis of data from field and geophysical investigations of well cross sections for studying the collector properties and petroleum and water saturation of productive Devonian deposits in Western Bashkiria and Eastern Tataria

Degree: Cand Geol-Min Sci

Dependent at
~~Publication~~ *Publication*
Min Higher Education USSR, Moscow Order of Labor Red Banner Petroleum Inst imeni Academician I. M. Gubkin, Chair of Field Geophysics

Reference Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 47, 1956

15-57-8-11534D

Oil Accumulation Properties and Petroleum-Water (Cont.)

ASSR and Eastern Tatarskaya ASSR, on the basis of comparison of geophysical data obtained in the wells and determinations of oil accumulation properties on samples of rock. He shows that in a number of cases proposed methods require refinement. In particular, he improves the accuracy of methods of determining porosity of rock using natural potentials measurable in the wells, as well as the permeability of petroleum-saturated strata according to their specific electrical resistance. Analysis of production and of geophysical measurements in wells, drilled to determine the position of the water-petroleum contact, show that in the process of water injection into separate strata of the Tuymazy and Bavly deposits the translocation of the petroleum surface occurs nonuniformly and the surface of the water-petroleum contact in these formations is not horizontal. Hence, observations in a few control wells are not sufficient to trace the changes of the water-petroleum contact during the process of water injection. Measurements--particularly those obtained by radiometric methods--must be taken in a large number of wells.

N. A. Per'kov

ASSOCIATION: Mosk. neft. in-t (Moscow Petroleum Institute)
Card 2/2

SULTANOV, S.A., aspirant.

Practical application of radiation logging in wells to
determine the oil-water contact. Neftianik 1 no.4:29-30
Ap '56. (MLRA 9:10)

1. Kafedra promyslovoy geofiziki Moskovskogo neftyanogo
instituta imeni I.M. Gubkina.
(Oil well logging, Radiation)

СУЛТМОВ, С. А.

"Radiometry as Applied to Oil Wells in Developing an Oilfield"

Problems of Petroleum Production and Petroleum Engineering, Moscow, Neftyanoy
institut, Gostpytekhnizdat, 1957, 393pp. (Trudy vyp. 20)

This book is a collection of articles written by professors and faculty members
of the Petroleum Inst. in I. M. Gubkin.

SULTANOV, S. A.

"Radiometric Survey in Controlling the Movements of Bottom-Hole Oil Well Waters,"
Utilization of Radioactive Isotopes & Emanations in the Petroleum Industry
(Symposium). Min. Petroleum Industry USSR, 1957.

Results of the Joint Session of the Technical Council of Min. of the Petroleum
Industry USSR and Soviet Sci. and Technical Association, Moscow 14-19 Mar 1956.

5. *Prilozheniye*, 5A, 93-94, 20

Authors: *Abdulin, A.I. and Sultanov, A.A.*

Title: *How Coning Water Appears During Oil Well Exploitation (Izraznyutsya li konyagi obvodneniya pri ekspluatatsii skvazhin)*

Journal: *Neft i gaz Khozaystvo*, 1957, Nr 6, pp. 32-35 (11 pp.)

Abstract: The authors examine the problem of coning water from the standpoint of radiometric observations made for the purpose of finding the oil-water contact. A radiometric study of an oil-bearing stratum of 20-40 cm. radius showed that formation of coning water greatly affects the accuracy of data concerning the natural location of the oil-water zone, and a substantial accumulation of coning water entirely excludes radiometric methods. Therefore, control of coning water becomes a subject of special study when oil field tests are made and when the oil-water contact is determined by radiometric methods. The process of coning from the standpoint of hydrodynamics is sufficiently well known in literature. Theoretically a well will be flooded by water within ten or more days if coning occurs, yet it is not so in practice. At the Tuzmaz and Pavly oil fields, which are of the flat bed type, wells drilled in the so-called "plankton" sector of the deposit were not flooded by coning water. For many years these highly productive wells have been yielding petroleum free of water or with small, slowly increasing quantities of water. The absence of significant coning formation is supported by correlated radiometric data on oil-water contact in producing

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124-58-9-10166

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 199 (USSR)

AUTHOR: Sultanov, S. A.

TITLE: Radiometric Survey of Wells in Oil-reservoir Development
(Radiometriya skvazhin v praktike razrabotki neftyanykh mestorozhdeniy)

PERIODICAL: Tr. Mosk. neft. in-ta, 1957, Nr 20, pp 61-66

ABSTRACT: An examination of the results of the employment of radiometric methods for the holding off of the water-oil interface at the Tuymazy deposit. It is noted that these methods permit a determination of the lifting rate of the bottom water and the construction of a map of the water-oil boundary interface.

V. N. Nikolayevskiy

1 Oil wells--USSR 2. Radiometers--Applications

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YERONIN, V.A.; MAL'TSEV, M.V.; VAKHITOV, G.G.; SULTANOV, S.A.

Introducing new machinery and methods in the exploitation of
Tatar oil fields. Neft. Khoz. 35 no.10:24-31 0 '57. (MIRA 11:1)
(Tatar A.S.S.R.--Petroleum engineering)

SULTANOV, S.A.; MARDANOV, M.A.; VELIYEV, K.G.; MARKHASEVA, S.M.

Oxidation of isopropylene benzene obtained in the presence of
aluminosilicate catalysts [in Azerbaijani with summary in Russian];
Azerb.neft.khoz. 36 no.7:34-36 Je '57. (MIRA 10:10)
(Oxidation) (Benzene) (Aluminosilicates)

MAMEDALIYEV, Yu.G.; SULTANOV, S.A.

Alkylating benzene in a pulverulent catalyst fluidized bed [in
Azerbaijani with summary in Russian]. Azerb.neft.khoz. 36 no.8:28-30
Ag '57. (MIRA 10:11)

(Alkylation) (Benzene) (Fluidisation)

S'LTANOV, S. A.: Master Chem Sci (diss) -- "Alkylation of benzene with olefins in the boiling layer of a catalyst". Baku, 1958, published by the Acad Sci Azerb SSR. 10 pp (Acad Sci Azerb SSR, Inst of Oil, Azerb Sci Res Inst of the Petroleum-Refining Industry im V. V. Kuybyshev), 150 copies (KL, No 6, 1959, 126)

LOKSHIN, I.A.; SULTANOV, S.A.; PULUYAN, I.G.

Present status of the development of the Bavly oil field.
Geol.nefti 2 no.3:5-13 № '58. (MIRA 12:6)

1. Upravleniye neftyanoy promyshlennosti Tatsovnarkhoza.
(Bavly District--Oil fields--Production methods)

KINZIKEYEV, A.R.; POLUYAN, I.G.; SULTANOV, S.A.

Oil potential of the coal-bearing horizon in the Bavly oil field.
Geol.nefti 2 no.10:30-35 0 '58. (MIRA 11:11)

1. Tatarskiy neftyanoy issledovatel'skiy institut i neftepromyslovoye
upravleniye Tresta Bavlinskoy neftyanoy promyshlennosti.
(Bavly District--Petroleum geology)

MAMEDALIYEV, Yu.G.; ALIYEV, V.S.; SULTANOV, S.A.

Alkylation of benzene in a pilot plant in a fluid bed of a finely-dispersed circulating catalyst under pressure [in Azerbaijani with summary in Russian]. Dokl. AN Azerb. SSR 14 no.9:681-685 '58.
(Benzene) (Alkylation) (MIRA 11:10)
(Fluidization)

MAMEDALIYEV, Yu.G.; SULTANOV, S.A.

Synthesis of dialkyl benzene [in Azerbaijani with summary in
Russian]. Azerb. neft. khoz. 37 no.9:33-35 S '58. (MIRA 11:12)
(Benzene)

SULTANOV, S.A.; MARDANOV, M.A.

Using aluminosilicate catalysts with various promoters in the
reaction of benzene dialkylation. Azerb.neft.khoz. 37 no.10:
32-33 0 '58. (MIRA 12:2)
(Benzene) (Aluminosilicates) (Alkylation)

SULTANOV, S.A.

Displacement of the water-oil contact in water-drive reservoirs
of the platform type and the industrial evaluation of oil re-
covery. Trudy VNI no.24:129-140 '59. (MIRA 13:5)
(Oil reservoir engineering)